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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,226	03/30/2004	Andreas Raabe	SCHWP0186USA	7171

7590 06/01/2007  
RENNER, OTTO, BOISSELLE & SKLAR, LLP  
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Cleveland, OH 44115-2191

EXAMINER
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JASANI, ASHISH S

ART UNIT	PAPER NUMBER
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3737

MAIL DATE	DELIVERY MODE
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06/01/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/815,226	<b>Applicant(s)</b> RAABE ET AL.	
	<b>Examiner</b> Ashish S. Jasani	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/30/04 &amp; 8/19/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(g)(1) during the course of an interference conducted under section 135 or section 291, another inventor involved therein establishes, to the extent permitted in section 104, that before such person's invention thereof the invention was made by such other inventor and not abandoned, suppressed, or concealed, or (2) before such person's invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it. In determining priority of invention under this subsection, there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

2. Claims 1-10, 14-15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Liao et al. (MICCAI 2001, LNCS 2208, pp. 392-400, 2001).

Liao et al. teaches of image registration (abstract) utilizing a number of modalities including x-ray (Figure 3). Liao et al. teaches of optical tracking for instrument and display tracking (page 398, ¶ 2). Figure 8 details (x,y,z) transform in which the optical tracking system is a 3D system which uses multiple angles. Also as shown in Figure 8, the tracking markers are disposed in a linear arrangement. Liao et al. teaches of representing the surgical instrument on the display due to occlusion that occurs during interventional surgery (abstract). Liao et al. teaches that the method overcomes parallax error (page 399, Section 4).

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 11-13, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liao et al. (MICCAI 2001, LNCS 2208, pp. 392-400, 2001) in view of Peters (Proceedings of SPIE Vol. 4319 (2001)).

Liao et al. teaches of image registration (abstract) utilizing a number of modalities including x-ray (Figure 3). Liao et al. teaches of optical tracking for instrument and display tracking (page 398, ¶ 2). Figure 8 details (x,y,z) transform in which the optical tracking system is a 3D system which uses multiple angles. Also as shown in Figure 8, the tracking markers are disposed in a linear arrangement. Liao et al. teaches of representing the surgical instrument on the display due to occlusion that occurs during interventional surgery (abstract). Liao et al. teaches that the method overcomes parallax error (page 399, Section 4). Liao teaches of image registration but does not teach of a surgical microscope or rotational angiography.

Peters teaches of image registration teaches of image registration (abstract) with respect to rotational angiography (page 7, ¶ 3) and overlaying the imaging on to a surgical microscope display (page 5, sections 3.3-3.4).

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to combine the Liao et al. image registration technique with the Peters rotational angiography and surgical

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microscope in order to increase safety amongst interventional procedures in which views are occluded by surrounding tissue.

**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashish S. Jasani whose telephone number is 571-272-8025. The examiner can normally be reached on Mon. - Fri. 9:30 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272 - 4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASJ

  
ELENI MANTIS MERGADER  
SUPERVISORY PATENT EXAMINER